




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION II  
EDISON, NEW JERSEY 08837

AUG 10 2015

**ACTION MEMORANDUM – RV1**

**SUBJECT:** Action Memorandum for an Emergency Removal Action at the Former Kil-Tone Company Site, Vineland, Cumberland County, New Jersey

**FROM:** Kimberly Staiger, On-Scene Coordinator   
Removal Action Branch

**TO:** Walter E. Mugdan, Director  
Emergency and Remedial Response Division

**THRU:** Joseph D. Rotola, Chief  
Removal Action Branch

**Site ID:** A24N

**I. PURPOSE**

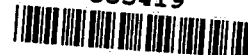
The purpose of this memorandum is to document the decision to initiate an emergency response action described herein for the Former Kil-Tone Company Site located in Vineland, Cumberland County, New Jersey. The On-Scene Coordinator (“OSC”) requested and was granted verbal authorization pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”) to initiate an emergency removal action. Authorization was granted by the Acting Director of the Emergency and Remedial Response Division (“ERRD”) on July 1, 2015. A total project ceiling of \$200,000 was authorized, of which \$150,000 was for mitigation contracting.

**II. SITE INFORMATION**

**A. Site Description**

Site Name:	Former Kil-Tone Company Site
Superfund Site ID (“SSID”):	A24N
NRC Case Number:	1121577
CERCLIS Number:	NJN000200874
Site Location:	527 East Chestnut Avenue, Vineland, Cumberland County, New Jersey, 08360
Lat/Long:	39.4784099 / -75.0254889
Potentially Responsible Party (“PRP”):	See Section V.A.3.
NPL Status:	Not listed
Removal Start Date:	July 1, 2015

355419



## **B. Site Background**

The Former Kil-Tone Company Site ("Site") is located at 527 East Chestnut Avenue in a mixed use area within the City of Vineland, Cumberland County, NJ. Soil sampling conducted by the New Jersey Department of Environmental Protection ("NJDEP") in August 2014 discovered high concentrations of arsenic and lead in the soils at the Site property and several neighboring residential properties. NJDEP referred the site for removal action consideration on November 14, 2014.

The Kil-Tone Company manufactured arsenic-based pesticides from the late 1910s until the late 1930s. Specific compounds manufactured by the company include lead arsenate, London purple, Paris green, and copper lime calcium arsenate dust. During the late 1800s and early 1900s, arsenicals like Paris green, lead arsenate, and calcium arsenate were popular and common pesticides used in agriculture.

LERCO, a former fuel distribution facility, is situated across Chestnut Avenue from the Site property. Remedial work to address petroleum related constituents in soil and groundwater has been performed on the property under the NJDEP Licensed Site Remediation Program ("LSRP"). Elevated levels of arsenic and lead are present in the soil and groundwater at the LERCO property, with arsenic levels as high as 20,000 ppm and lead levels as high as 28,700 ppm found in the soils at depth. LERCO has attributed the contamination to the historic pesticide manufacturing operations conducted by the Kil-Tone Company at the 527 East Chestnut Avenue property. NJDEP initiated a sampling event in August 2014 at the Site property and the surrounding residential properties to determine if historic releases impacted the residential community.

The NJDEP detected arsenic and lead in the top 6" of soil at the residential properties at concentrations as high as 83 ppm and 1,100 ppm, respectively. Arsenic is present on the Site property at concentrations in the top 6" of soil as high as 740 ppm and at depth as high as 5,800 ppm. Groundwater samples collected from temporary well points on the Site have arsenic concentrations that range from 8.1 ppb to 14,000 ppb, and arsenic has been detected in monitoring wells on the LERCO property at concentrations as high as 15,900 ppb.

The Site property is currently owned by Urban Manufacturing LLC, a holding company with Urban Sign & Cranes, Inc. as a tenant. Urban Sign & Crane, Inc. fabricates and installs commercial signage. Operations are conducted within the building, with the outside portions of the lot used for storage of equipment and vehicles. A large portion of the property is unpaved, with asphalt paving located around the eastern and northern perimeter of the property.

The LERCO property is currently vacant and mostly unpaved with rock/gravel covering the unpaved areas. The property is an active LSRP site with NJDEP oversight, but has been included in the state referral. No soil samples have been collected in the top 6" of soil present on this property.

## **1. Removal site evaluation ("RSE")**

In January and February 2015, the US EPA conducted soil sampling at the 27 residential properties located closest to the Former Kil-Tone Company Site property. Several soil borings were installed across each property, and samples were collected from the following depth intervals within each boring: 0-2", 2-6", 6-12" and 12-24". Arsenic and lead are present within the top two feet of soil at 19 of the 27 residential properties sampled at concentrations exceeding the EPA Residential Removal Management Levels ("RML") of 67 ppm for arsenic and 400 ppm for lead.

Background soil samples were collected from several City owned properties in Vineland including Landis Park located at 600 East Park Avenue, South Vineland Park located at 429 West Elmer Road, and the Vineland Cemetery located on South Delsea Drive. Two soil borings were installed at each background location, and soil samples were collected from the following depth intervals: 0-2", 2-6", 6-12" and 12-24". The highest concentrations of arsenic (6.4 mg/kg) and lead (57 mg/kg) were detected in Landis Park in the 0-2" depth interval.

Analytical results indicate the presence of elevated concentrations of lead and arsenic exceeding the EPA Residential RML on 19 residential properties. Concentrations of arsenic ranged from 3 mg/kg to 1,000 mg/kg with the highest concentration detected in the 2-6" depth interval. Concentrations of lead ranged from 13 mg/kg to 2,000 mg/kg with the highest concentration detected in the 6-12" depth interval.

EPA's Environmental Response Team ("ERT") performed a high-resolution characterization of the Site soils using a Cone Penetrometer/X-Ray Fluorescence ("CPT/XRF") from June 22 – July 1, 2015. A Geoprobe was used to collect soil cores to obtain visual comparisons for the CPT logs and to run confirmation lab analyses on the XRF data. Arsenic concentrations have been detected at 47,000 ppm and lead concentrations have been detected at 119,280 ppm in the soils near the former rail spur on the CPT/XRF. Field XRF of the soil borings collected near the location of the former grinding house have recorded concentrations of both arsenic and lead at 100%.

On July 1st at 12:15 hours the CPT/XRF drill probe punctured a pressurized water line that fed the fire suppression system for the Urban Sign & Crane building. The Vineland City Water Department shut off the water at the main approximately 100 minutes after the pipe break. The 8" diameter pipe is located adjacent the main loading dock closest to Chestnut Avenue. This area of the property contained the highest concentrations of arsenic and lead based upon the CPT/XRF readings. The water line break caused contaminated soil and sediments to release into a storm sewer that drains to the Tarkiln Branch. A release was called into the National Response Center (#1121577), and the NJDEP created a state case number (State Case #15-07-01-1927-51).

On July 1, 2015 verbal authorization was received to conduct an emergency removal action to initiate repairs of the fire suppression line and to address the release of hazardous materials into the storm sewer located at the northwestern corner of the Site property.

## **2. Physical location and site characteristics**

The Site is located in a mixed use residential/commercial/light industrial neighborhood of Vineland, New Jersey. The Site is bounded to the north by East Cherry Street, to the south by Paul Street, to the east by residential properties which front on South Sixth Street and to the west by South East Boulevard. The nearest residential property to the Former Kil-Tone Company Site property sits immediately adjacent the property to the east. The Third Street Complex, a public park funded by NJDEP Green Acres, is located less than 0.25 miles west of the Site on East Chestnut Avenue, and the Gloria M. Sabater Elementary School is located 0.25 miles north of the Site on Almond Street.

The residential area immediately surrounding the Former Kil-Tone Site property are mostly older structures constructed in the early 1900s. The majority of the properties are single family homes or duplexes that have been converted into tenant occupied apartment buildings. Approximately 75% of the residents in a one block radius of the site speak Spanish in the home.

The City of Vineland is 69 square miles and is the largest city in area within the State of New Jersey. As of the 2010 Census, the city had a population of 60,724, with 32% of the population speaking a language other than English at home.

## **3. Release or threatened release into the environment of a hazardous substance, pollutant, or contaminant**

Sampling and analysis conducted at the Site identified the presence of elevated concentrations of arsenic and lead. Lead and arsenic are CERCLA hazardous substances as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14). The statutory source for designation as a hazardous substance under CERCLA is also noted.

The Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9). Hazardous substances, pollutants, or contaminants present at the Site represent a threat to the public health and welfare as defined by Section 300.415(b)(2) of the National Contingency Plan (NCP), in that there is a potential human exposure at the Site via inhalation, ingestion, and/or direct human contact.

HAZARDOUS SUBSTANCE	STATUTORY SOURCE FOR DESIGNATION AS A HAZARDOUS SUBSTANCE UNDER CERCLA
Lead	1,2
Arsenic	1,2

1. Clean Water Act, Section 307(a)
2. Clean Air Act, Section 112

### **III. THREATS TO PUBLIC HEALTH, OR WELFARE, OR THE ENVIRONMENT**

#### **A. Nature of Actual or Threatened Release of Hazardous Substances, Pollutants or Contaminants**

Arsenic and lead contaminated soils and sediments have been released to the surface soils on the site property and into the storm sewer that discharges to the Tarkiln Branch, a tributary to the Maurice River. Contact with the arsenic and lead contaminated soils and sediments may present a health risk to workers.

Lead is a cumulative poison where increasing amounts can build up in the body eventually reaching a point where symptoms and disability occur. Particularly sensitive populations are women of child-bearing age, due to the fetal transfer of lead, and children. Cognitive deficits are associated with fetal and childhood exposure to lead. An increase in blood pressure is the most sensitive adverse health effect from lead exposure in adults. Effects on the kidney, nervous system and heme-forming elements are associated with increasing blood lead concentrations, both in children and adults. Other symptoms include: decreased physical fitness, fatigue, sleep disturbance, aching bones, abdominal pains, and decreased appetite.

The Department of Health and Human Services ("DHHS") has determined that lead and lead compounds are reasonably anticipated to be human carcinogens based on limited evidence from studies in humans and sufficient evidence from animal studies, and the EPA has determined that lead is a probable human carcinogen.

DHHS has determined that inorganic arsenic is a known human carcinogen. EPA also has classified inorganic arsenic as a known human carcinogen. Inhalation of elevated levels of arsenic can result in a sore throat and irritated lungs, and may develop a pattern of skin changes. These include patches of darkened skin and the appearance of small "corns" or "warts" on the palms, soles, and torso, and are often associated with changes in the blood vessels of the skin. Skin cancer may also develop.

Longer exposure to arsenic at low concentrations can lead to skin effects and to circulatory and peripheral nervous disorders. There are some data suggesting that inhalation of inorganic arsenic may also interfere with normal fetal development.

#### **B. Check Applicable Factors (From 40 CFR 300.415) Which Were Considered in Determining the Appropriateness of a Removal Action**

- ☒ Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances, or pollutants, or contaminants [300.415(b)(2)(i)].
- ☐ Actual or potential contamination of drinking water supplies or sensitive ecosystems [300.415(b)(2)(ii)].
- ☐ Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that pose a threat of release [300.415(b)(2)(iii)].
- ☒ High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate [300.415(b)(2)(iv)].
- ☐ Weather conditions that may cause hazardous substances or pollutants to migrate or to be released [300.415(b)(2)(v)].
- ☐ Threat of fire or explosion [300.415(b)(2)(vi)].

- X The availability of other appropriate federal or State response mechanisms to respond to the release [300.415(b)(2)(vii)].
- Other situations or factors that may pose threats to the public health or welfare of the United States or the environment [300.415(b)(2)(viii)].

#### **IV. ENDANGERMENT DETERMINATION UNDER CERCLA SECTION 106: HAZARDOUS SUBSTANCES**

Actual or threatened releases of hazardous substances from the Site may present an imminent and substantial endangerment to public health, or welfare, or the environment.

#### **V. SELECTED REMOVAL ACTION AND ESTIMATED COSTS**

##### **A. Situation and Removal Activities to Date**

###### **1. Current situation**

EPA activated a Region 2 Emergency and Rapid Response Services (“ERRS”) contractor on July 1, 2015 to assist in removal operations. Verbal authorization of funding was granted by the Acting Director of the ERRD for a total project ceiling of \$200,000 to begin emergency removal activities. ERRS personnel began operations at the Former Kil-Tone Company Site property on July 1, 2015.

###### **2. Removal activities, to date**

The ERRS contractor mobilized to the Site to make the necessary repairs to the fire suppression line and halt the migration of contaminated sediments and soils into the storm sewer on July 1, 2015. The area of the water line break was excavated to a depth of 5 feet below grade to expose the water line and determine the location of the break.

Repairs to the water line were completed on July 3, 2015 at 1630 hours and the building was removed from a fire watch after the sprinkler system was flushed and pressure tested.

###### **3. Enforcement**

EPA has not identified Potentially Responsible Parties (“PRPs”) and is currently conducting a PRP search. The OSC will work with enforcement staff and the Office of Regional Counsel in an attempt to identify all viable PRPs to recover costs associated with this removal action.

##### **B. Planned Removal Actions**

###### **1. Proposed action description**

EPA activated the ERRS contractor who repaired the water line and halted the migration of contaminated sediments and soils into the storm sewer. This is an emergency removal action intended to prevent contact with contaminated soils that were brought to the surface during the water line break, and to provide off-site disposal of wastes generated during the water line repair.

## **2. Contribution to remedial performance**

The proposed actions will, to the extent practicable, contribute to the efficient performance of any long-term remedial action at the Site.

## **3. Applicable or Relevant and Appropriate Requirements ("ARARs")**

Removal actions conducted under CERCLA are required to attain ARARs to the extent practicable. In determining whether compliance with ARARs is practicable, the OSC may consider appropriate factors, including the urgency of the situation and the scope of the removal action to be conducted.

## **4. Project schedule**

The action of stabilizing the hazardous material was initiated on July 1, 2015. Additional activities are required to complete the removal action.

## **C. Estimated Costs\***

Contractor costs (ERRS, Includes 20% Contingency)	<b>\$150,000</b>
Other Extramural Costs (Strike Team, other Fed Agencies, Removal Support Team)	<b>\$15,000</b>
Contingency costs	<b>\$35,000</b>
<b>Total Removal Project Ceiling</b>	<b>\$200,000</b>

\*EPA direct and indirect costs, although cost recoverable, do not count toward the Removal Ceiling for this removal action. Liable parties may be held financially responsible for costs incurred by the EPA as set forth in Section 107 of CERCLA.

## **VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

A delay in action or no action at the Site would increase the actual or potential threats to the public health and/or the environment.

## **VII. OUTSTANDING POLICY ISSUES**

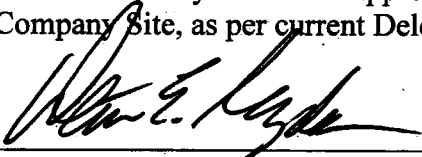
None.

## **VIII. APPROVALS**

This decision document represents the selected removal action for the Site, developed in accordance with CERCLA as amended, and is not inconsistent with the National Contingency Plan ("NCP"). This decision is based on the administrative record for the Site.

Conditions at the Site meet the NCP Section 300.415(b) criteria for a removal action. This document confirms the verbal authorization for the removal action conducted at the Former Kil-Tone Company Site. The total project ceiling is \$200,000, of which \$150,000 is for mitigation contracting. This amount will be funded from the Regional Removal Allowance.

Please indicate your formal approval of this request for a removal action at the Former Kil-Tone Company Site, as per current Delegation of Authority, by signing below.



Walter E. Mugdan, Director  
Emergency and Remedial Response Division

*August 10, 2015*

Date

cc: J. Enck, ORA  
L. Plevin, ORA  
W. Mugdan, ERRD-D  
A. Carpenter, ERRD-DD  
N. DiForte, ERRD-DD  
J. Rotola, ERRD-RAB  
E. Wilson, ERRD-RAB  
B. Grealish, ERRD-RAB  
G. DeAngelis, ERRD-RAB  
C. Petersen, ERRD-NJRB  
J. Desir, ERRD-SPB  
M. Hauptman, ERRD-SPB  
K. Giacobbe, OPM-GCMB  
J. Fajardo, ORC-NJSB  
M. Fiore, OIG  
R. Worley, 5202G  
T. Grier, 5202G  
F. Mumford, NJDEP  
L. Rosman, NOAA  
A. Raddant, USDOJ  
D. Kluesner, PAD  
M. Mears, PAD  
E. Rodriguez, PAD  
R. Bermudez, City of Vineland  
R. Tonetton, City of Vineland  
D. Jones, City of Vineland